Sophia Cofone

Portfolio: sophiacofone.github.io/portfolio/ | **GitHub:** github.com/sophiacofone | **LinkedIn:** linkedin.com/in/sophia-cofone/

PROFESSIONAL SUMMARY

Early-career Data Scientist with a foundation in business administration and accounting. Skilled in machine learning, deep learning, data visualization, web development, and database management. Passionate about leveraging data modeling techniques to narrate the underlying 'story' of data and effectively convey insights to diverse audiences.

EDUCATION

Northeastern University, Roux Institute - Portland, ME — Summer 2023
Master of Science in Data Science — GPA 3.9
Relevant Coursework: Discrete Math, Linear Algebra, Probability, Algorithms

University of Massachusetts Amherst - Amherst, MA — Spring 2020
Bachelor of Business Administration in Accounting (Minor: Philosophy) — GPA 3.9

TECHNICAL SKILLS

Programming: Python (sci-kit, sci-py, numpy, pandas) | R | JavaScript
Data Visualization: D3.js | Matplotlib | Seaborn
Database Management: SQLite, MySQL | Data warehousing | Data Mining | MongoDB
Full-stack Web Development: React.js | Redux | Node.js | Bootstrap/CSS | API integration
Machine Learning: Unsupervised | Supervised | Deep Learning (TensorFlow) | Computer Vision

WORK EXPERIENCE

Omnic Data, Inc. | AI Esports Coach, Brunswick, ME — May 2022 - September 2022
Software Assist

- Created interactive, user-customizable data visualization histograms, line charts, dendrograms, and heatmaps (using Javascript, Ruby, D3.js, HTML, CSS), to present key gameplay statistics derived from raw user data.
- Implemented visualizations into web application, including the creation of views, controllers, and database queries using Ruby and ActiveRecord, ensuring each user received the most up-to-date data according to their account.
- Built data pipelines in javascript to pre-process raw data to a usable form for data analysis and visualization.

PricewaterhouseCoopers, Boston, MA — *September 2020 - June 2021*
Experienced Associate - ESG (Environmental, Social, Governance) & Process Assurance

- Developed and designed a company's ESG metrics to represent the company's stakeholder concerns and ensure compliance with ESG standards and rating agency methods.
- Owned the creation, documentation, and testing of new IT controls such as database access reviews.

HIGHLIGHTED PROJECTS

Semantic image segmentation using Convolutional Neural Networks — Summer 2023
Northeastern University, Systems Bioengineering Lab

- Designed a UNet-inspired CNN to segment bacteria in biological microscopy images with IOU score of 92%.
- Leveraged transfer learning and fine-tuning techniques to enhance model accuracy by over 60%.
- Improved image quality and reduced noise by implementing a self-supervised deep learning CNN.

Gameplay-Based Classification of Valorant Players: Insights and Feature Importance — Summer 2023
Northeastern University, Omnic Data - github.com/sophiacofone/valorant_omnic

- Validated hypothesis that players in Valorant can be classified into distinct positions using only gameplay data (without considering the chosen agent or map), achieving 82% accuracy via decision tree model.
- Engineered informative features that better capture in-game events, resulting in 10% model accuracy improvement.
- Enabled users to gain insights into their classification through visualization, emphasizing feature importance.

Building relational databases and data warehouses using MySQL — Spring 2023
Northeastern University - github.com/sophiacofone/bird_relational_db • github.com/sophiacofone/pub_warehouse

- Designed and built relational databases using MySQL and SQLite, ensuring data cleanliness and normalization.
- Integrated multiple databases into a data warehouse, constructing fact tables to allow efficient querying and analysis.
- Leveraged R to transform data, employing optimization techniques (hash tables) for 10x improved performance.